

PRODUCTION OF SEMICONDUCTOR DEVICE

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Abstract of JP57073953

PURPOSE:To prepare a bump electrode with high speed and dimensionally accuracy without a concave part in the central part by a method wherein a plating current is increased in proportion to the growth of a bump and a current density is decreased when an electrode comes close to the specified height. **CONSTITUTION:**An Ag bump electrode 5 is formed by the steeping or jumping type electric plating method on a wafer 1 which consists of a plurality of pellets and is formed with a rear side electrode and an Au electrode 6 formed on the front surface via an opening in an oxidized film 4. During the process of this plating, until the height of the bump electrode 5 reaches h3 that is equivalent to 80-90% of the desired height h1, a plating current is increased in proportion to the increase in the surface area of the bump electrode, which is allowed to increase its height at a certain speed. When the electrode has reached the height h3, a current density is decreased so that the current is prevented from concentrating in the end part of the opening for the oxidized film 4, while the plating layer is grown in such a manner that a small concave part 5' appearing in the central part of the bump electrode has a normal shape. By so doing, a bump electrode with accurate dimensions and shape can be prepared at high speed.

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